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# Given Harper

Charlie Schlenker (Interviewer)

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R. Given Harper, Illinois Wesleyan University, interviewed by Charlie Schlenker, WGLT  
WGLT Interview Transcript  
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A recent study in the Journal Nature predicts the extinction of more than one million plant and animal species if current global warming trends continue. WGLT's Charlie Schlenker talks with an Illinois Wesleyan University biologist about the implications of the work....

Charlie Schlenker: An international team of scientist look at more than 1100 species of animals and plants in Mexico, Australia, Europe, the Amazon, the Brazilian Cerrado, and South Africa to gauge the potential impact of global climate change on wildlife. Given Harper is a Biology Professor at Illinois Wesleyan University. Harper says the effects of climate change are already becoming apparent.

Given Harper: Certainly a number of bird species are nesting earlier than normal. Flowers actually are blooming earlier than normal. They've also actually documented in cloud forests in Central and South America that organisms are shifting their altitudinal range. They're moving up the sides of the mountains in the cloud forests.

Charlie Schlenker: But the prediction of a million species' deaths over the next century caused by temperature changes seems a little dramatic, why couldn't the species adapt or change their range as you said they're starting to do?

Given Harper: Well you have to basically look at the time scale, this is predicted to occur with a hundred year period. This temperature increase though will roughly equal the temperature increase that's occurred in the past 13-18,000 years, so from an evolutionary perspective, organisms are gunna have to adapt in an incredibly short period of time and for some of them, certainly, it just—it won't be possible.

Charlie Schlenker: So what happens for agriculture for instance?

Given Harper: Well it depends, I've seen some predictions that some crops actually will not be harmed but if the temperature increase occurs to the maximum that's predicted, then basically this part of the Midwest will not be a prime area for growing corn and soy beans. That will have shifted northward up toward the pole.

Charlie Schlenker: How far north?

Given Harper: Again it depends basically on the extent to which the temperature change occurs but perhaps—I've seen some estimates that—in parts of Canada.

Charlie Schlenker: What's going to die first?

Given Harper: Well, the slow-moving species, the species that are slow dispersers or this—and the species basically whose pathways will be blocked. For example, tortoises in Florida, if they have to shift northward with all that development in Florida, certainly their way will be impeded.

Charlie Schlenker: Certainly agriculture is something for humans to care about but, okay, what real difference to human beings will this make?

Given Harper: Well humans depend on biodiversity, the processes that biodiversity provides. All the elements that are in living organisms are constantly cycled from these living organisms to the environment and back to living organisms and if we lose biodiversity, we lose the functions that they provide and life on earth as we know it is dependent upon those functions.

Charlie Schlenker: This issue appears in the popular media, scientific literature, but not so much in government policy discussion, how would you go about changing that?

Given Harper: Well I—it really distresses me. You don't see a lot about this in even the popular media. Frankly, politicians are not discussing it I think. Certainly we need to basically utilize less fossil fuel. I know that Senator Durbin, for example, had proposed an increase in the fuel efficiency standards for cars. Unfortunately, Congress did not approve that. Politicians need to take this seriously, to take steps to come up with alternative energies, and people need to become aware of this and let their politicians know how they feel.

Charlie Schlenker: Given Harper is the Associate Director of Illinois Wesleyan University's Environmental Studies program. I'm Charlie Schlenker, WGLT News.